CLAIMS

1. A 3-dimensional image creating apparatus comprising:

a primary image creator for creating a primary image of image information for multiple viewpoints;

a thumbnail image creator for creating a thumbnail image;

a 3-dimensional control information creator for creating 3-dimensional control information for implementing 3-dimensional display of the primary image; and

a multiplexer for multiplexing the primary image, the thumbnail image and the 3-dimensional control information.

2. The 3-dimensional image creating apparatus according to Claim 1, wherein the thumbnail image creator creates the thumbnail image by directly reducing the primary image.

3. The 3-dimensional image creating apparatus according to Claim 1, wherein the thumbnail image creator creates the thumbnail image by extracting a section of one viewpoint image from the primary image.

4. The 3-dimensional image creating apparatus according to Claim 1, wherein the thumbnail image creator embeds a symbol that indicates an inclusion of a 3-dimensional image into the thumbnail image.

5. The 3-dimensional image creating apparatus according to Claim 1, wherein the thumbnail image creator creates the thumbnail image made up of a reduced image of the primary image and a reduced image of one viewpoint image extracted from the primary image and fitted therein in a picture-in-picture manner.

6. A 3-dimensional image reproducing apparatus, comprising:

a demultiplexer for separating a primary image data, a thumbnail data and a 3-dimensional control information from an input image data; and

a thumbnail creator for outputting a thumbnail with a symbol that indicates an inclusion of a 3-dimensional image overlaid on the thumbnail data when the primary image data represents a 3-dimensional image.

7. A 3-dimensional image processing apparatus, comprising:

a parallax range acquisition means for acquiring a parallax range in which stereoscopic view is permitted;

a parallax quantity acquisition means for acquiring a parallax quantity of a 3-dimensional image; and

a decision means for deciding whether the parallax quantity of the 3-dimensional image falls within the parallax range.

8. A 3-dimensional image processing apparatus, comprising:

a parallax range acquisition means for acquiring a parallax range in which a stereoscopic view is permitted;

a parallax quantity acquisition means for acquiring a parallax quantity of a 3-dimensional image;

a ratio acquisition means for acquiring a ratio for enlargement or reduction of the 3-dimensional image; and

a decision means for deciding whether the parallax quantity of the 3-dimensional image that has been enlarged or reduced based on the ratio falls within the parallax range.

9. The 3-dimensional image processing apparatus according to Claim 7 or 8, wherein the decision means makes a deciding process based on a partial area of the 3-dimensional image.

10. The 3-dimensional image processing apparatus according to any one of Claims 7 to 9, further comprising a warning means for warning a user when the decision means determines that the parallax quantity falls out of the parallax area.

11. The 3-dimensional image processing apparatus according to any one of Claims 7 to 9, further comprising a parallax adjustment means for adjusting the parallax quantity of the 3-dimensional image when the decision means determines that

the parallax quantity falls out of the parallax range.

12. The 3-dimensional image processing apparatus according to any one of Claims 7 to 11, wherein the parallax quantity acquisition means uses a resolution of a stereoscopic display for displaying the 3-dimensional image, a size of a stereoscopic display for displaying the 3-dimensional image, or a resolution and size of a stereoscopic display for displaying the 3-dimensional image.

13. The 3-dimensional image processing apparatus according to any one of Claims 7 to 11, wherein the parallax range acquisition means uses a capability of separating left and right images of a stereoscopic display for displaying the 3-dimensional image.

14. The 3-dimensional image processing apparatus according to any one of Claims 7 to 11, wherein the parallax quantity acquisition means uses data previously tagged to the 3-dimensional image.

15. A 3-dimensional image processing program characterized by making a computer function as a parallax range acquisition means for acquiring a parallax range in which a stereoscopic view is permitted; a parallax quantity acquisition means for

acquiring a parallax quantity of a 3-dimensional image; and a decision means for deciding whether the parallax quantity of the 3-dimensional image falls within the parallax range.

16. A 3-dimensional image processing program characterized by making a computer function as a parallax range acquisition means for acquiring a parallax range in which a stereoscopic view is permitted; a parallax quantity acquisition means for acquiring a parallax quantity of a 3-dimensional image; a ratio acquisition means for acquiring a ratio for enlargement or reduction of the 3-dimensional image; and a decision means for deciding whether the parallax quantity of the 3-dimensional image that has been enlarged or reduced based on the ratio falls within the parallax range.

17. The 3-dimensional image processing program according to Claim 15 or 16, wherein the decision means makes the deciding process based on a partial area of the 3-dimensional image.

18. The 3-dimensional image processing program according to any one of Claims 15 to 17, characterized by making the computer function as a warning means for giving a warning to a user when the decision means determines that the parallax quantity falls out of the parallax area.

19. The 3-dimensional image processing program according to any one of Claims 15 to 17, characterized by making the computer function as a parallax adjustment means for adjusting the parallax quantity of the 3-dimensional image when the decision means determines that the parallax quantity falls out of the parallax range.

20. The 3-dimensional image processing program according to any one of Claims 15 to 19, wherein the parallax quantity acquisition means uses a resolution a stereoscopic display for displaying the 3-dimensional image, a size of a stereoscopic display for displaying the 3-dimensional image, or a resolution and size of a stereoscopic display for displaying the 3-dimensional image.

21. The 3-dimensional image processing program according to any one of Claims 15 to 19, wherein the parallax range acquisition means uses the capability of separating the left and right images of a stereoscopic display for displaying the 3-dimensional image.

22. The 3-dimensional image processing program according to any one of Claims 15 to 19, wherein the parallax quantity acquisition means uses data previously tagged to the 3-dimensional image.

23. A computer readable recording medium having a program according to any one of Claims 15 to 22 recorded therein.